

## ABSTRACT OF THE DISCLOSURE

A subsea gas compressor module having a housing comprising a sealing element generally defining within the pressure housing a first compartment holding as compressor and a second compartment holding an electric motor, the compressor and motor being driveably connected by at least one shaft. The first compartment is connected to an inlet line and an outlet line for sealing hydro carbon gas and for discharging gas. The second compartment has magnetic bearings for supporting the at least one shaft, and a pressure and volume regulator is fluidly connected to the second compartment and a gas supply, and includes elements for sensing respective pressures in the inlet and outlet lines whereby, based on the magnitude of sensed pressure, the pressure and volume regulator controls the pressure at which gas is injected into the second compartment.